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Abstract of the national paper of Israel

1. The Israel Space Agency (ISA) was established in 1983 as a governmental organization within the framework of the Ministry of Science and Technology. The Agency has been charged with the role of furthering space-related activities in Israel. In the following years its activity expanded considerably. Israel officially entered the space age in 1988, with the successful launch of the OFEQ-1 satellite.

2. OFEQ-1, 2 and 3 and the SHAVIT launcher that propelled them into space were developed in Israel based on new technologies and are already focal points for future international cooperation. On the basis of these satellites, Israel Aircraft Industries plans, together with a company from the United States of America, Core Software to develop, manufacture and launch eight commercial Earth Remote Observation System (EROS) satellites. The first such satellite will be launched at the end of 1999.

3. On 16 May 1996, the Israeli geostationary satellite AMOS, with nine transponders and beams over the Middle-East and eastern Europe, was successfully launched on an ARIANE-4 launcher.

4. The emphasis continues to be on building and infrastructure geared to achieving optimal economic outcomes by making use of Israel's technological advantages in selected niches, notably small satellites and remote sensing.

5. Other major areas of activity in space are:

(a) Remote sensing. The promotion of remote sensing satellites and the development of applications by users in Israel have a high priority on the ISA agenda;

(b) Automatic generation of digital elevation models using satellite pour l'observation de la Terre (Spot) imagery;

(c) Mapping of the geology, geomorphology and the risks related to active faults and associated seismic activities in the Jordan Rift Valley;

(d) Remote sensing study of the dynamics of vegetation cover as indicators of soil and land use conditions, as, for example, for the prediction of soil salination using cotton field colours as indicators;

(e) Measurement of soil moisture by synthetic aperture radar in the Negev Desert and the Middle East;

(f) National database for digital satellite imagery;

(g) Utilization of global positioning systems for research on the movement of tectonic plates in the region;

(h) The 48-kg micro-satellite Techsat-1a, built by the Israel Institute of Technology (Technion) and carrying several scientific payloads, was launched successfully in July 1998 by a Russian Zenith launcher. A small receiving station was also established at the Technion for control and communication with the satellite;

(i) Tauvex. This ultra-violet telescope is being built by EL-OP under the scientific supervision of the Department of Physics and Astronomy of Tel Aviv University. The telescope will be flown on the Russian Federation International SRG satellite as part of a multinational experiment. Although the launching was planned for 1994, it will take place only in 2000, owing to financial difficulties of the Russian Space Agency;

(j) ISA is involved in a scientific project with the Netherlands to build the Sloshat satellite, which is designed to investigate the "sloshing" problem in satellite fuel tanks. The satellite, which will be launched from a space shuttle of the National Aeronautics and Space Administration (NASA) of the United States in late 1999, will be equipped with an Israeli thruster system;

(k) ISA is funding an electrical thruster development project and also a small laboratory that inspects every component and subsystem before launch to see if it will survive the environmentally hostile conditions of space. The laboratory cooperates with the Centre national d'études spatiales (CNES) of France;

(l) ISA has initiated a feasibility study, being carried out by the Israeli company EL-OP and the German companies OHB and GAF, regarding the possibility of developing a small sophisticated commercial remote sensing satellite, David, based on a major spin-off of the Tauvex telescope. The first stage of the David programme is supported by the European Union and by ISA;

(m) A ground receiving station for satellite images was established on the grounds of Israel Aircraft Industries where the images of the French Spot satellite, the European ERS and OFEQ are received on a regular basis;

(n) At present, the scientific Mediterranean-Israeli Dust Experiment (MEIDEX) is in preparation. The MEIDEX payload will be launched on a NASA space shuttle accompanied by an Israeli astronaut (payload specialist);

(o) ISA is establishing, together with Israeli universities, an Earth Observation System Data and Information System (EOSDIS) node within the framework of a cooperation agreement between NASA and ISA. The EOSDIS node will become operational in 1999;

(p) International cooperation. ISA has officially signed cooperation agreements with NASA, CNES and the German Aerospace Center (DLR), and has a memorandum of understanding with the Russian Space Agency.

Point of contact:

Mr. Aby Har-Even
Director-General
Israel Space Agency

Tel.: 00972-3-642 22 97
Fax: 00972-3-642 22 98
E-mail: aby@most.gov.il

Address:

26a Chaim Levanon Street, Ramat Aviv
P.O. Box 17185
Tel Aviv 61171